

# PATENT SPECIFICATION

1,084,779

DRAWINGS ATTACHED.

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## COMPLETE SPECIFICATION.

### Improvements in Street Lighting Columns.

We, ABACUS ENGINEERING LIMITED, a British Company, of Forest Road, Skegby, Sutton-in-Ashfield and JOHN WILLIAM PRATT, a British Subject, of 36 Little Barn Lane, Mansfield, both in the County of Nottingham, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to improvements in street lighting columns and its object is to provide a street lighting column in which the lantern can be lowered near to the ground for cleaning purposes.

According to this invention a street lighting column is made in two parts which are hinged together and is associated with raising and lowering mechanism embodying a hydraulic ram to control the turning of the upper part of the column in relation to the lower part about the hinge to lower the lantern carried by the upper part to a position within reach of the ground for cleaning and returning the upper part to its normal position after the lantern has been cleaned. The raising and lowering mechanism comprises a frame formed from upper and lower parts hinged together. The hinged joint in the frame is connected by a hinge pin to the hinged joint in the column and the upper and lower ends of the frame are connected together by a hydraulic ram and when the frame is in position on the column, the upper end of the frame rests on the upper part of the column and the lower end of the frame rests on the lower part of the column. The frame is preferably provided with wheels for its easy transport from column to column. The invention will now be more particularly described with reference to the accompanying drawings in which:—

Fig. 1 is a front elevation,  
Fig. 2 a side elevation, and

Fig. 3 a plan of a street lighting column formed in upper and lower parts hinged together and hydraulically operated mechanism for holding the upper part whilst it is being lowered and for raising the upper part to return it to its normal position.

Like numerals indicate like parts throughout the drawings.

In carrying out this invention the street lighting column is made in two parts 1, 2 which are hinged together at 3. The upper part 1 has a cup 4 at its lower end which fits over the upper end of the lower part 2, when the upper part is in its normal position, and locks the upper part in its normal position as shown in the drawings. To lower the upper part about the hinge at 3, the upper part 1 is first raised clear of the lower part 2 so that the upper part can be turned about the hinge to lower the lantern carried by the upper part 1. To raise the upper part 1 relatively to the lower part 2, the hinge pin is eccentrically mounted in the lower part 2 and is turned by a key 5 inserted in a passage through the hinge pin.

In order to take the weight of the upper part 1 of the column as it is being lowered and subsequently raised to its vertical position, the mechanism hereinafter described is provided. This mechanism comprises a frame having upper and lower parts which are hinged together at 6. The upper part of the frame consists of two arms 7, 8 and the lower part of two arms 9, 10 and the arms on one part are hinged to the arms on the other part at 6 by co-axial sleeves through which the key 5 previously referred to passes to hold the frame in position on the column. When initially in position on the column a bracket 11 on the top of the upper part of the frame rests on the column above the

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hinge in the latter and a bracket 12 on the bottom of the lower part of the frame rests on the lower part of the column below the hinge therein as clearly shown in Fig. 2. The two brackets 11 and 12 are connected together by a hydraulic ram comprising a cylinder 13 and piston 14.

Mounted on the frame is a hydraulic pump 15 which is operated manually by the lever 16 to supply fluid under pressure to the ram cylinder 13 from a reservoir and a release valve 17 is provided to allow fluid to return from the cylinder 13 to the reservoir.

In use the frame is placed in position on a column and the key 5 inserted through the frame and column hinges. The key 5 is turned to raise the upper part of the column clear of the lower part of the column. The release valve 17 is opened to release the pressure in the ram and the upper part 1 of the column can then be turned about its hinge to bring the lantern down towards the ground. The ram controls the downward movement of the upper part 1 of the column as shown in broken lines in Fig. 2, the rate at which it moves depending on the amount the release valve 17 is opened. The downward movement of the upper part of the column 1 can be checked when desired by closing the release valve 17. When the lantern has been cleaned the hydraulic pump 15 is operated after closing the release valve 17 to feed fluid under pressure to the ram cylinder 13 to raise the upper part 1 of the column to its vertical position. The key 5 is then turned to lower the upper part 1 of the column into engagement with the lower part to lock the upper part in position. The key 5 is then removed and the frame is disconnected from the column for removal to another column for a similar operation with another column.

The frame is provided with a pair of wheels 18 to run on the ground to assist in the easy transportation of the raising and lowering mechanism from column to column as required.

The arrangement is easy to operate and permits of the lantern on a column being lowered near to the ground for cleaning or adjustment and obviates the possibility of accidents which might arise if ladders have to be used to reach the lanterns.

#### WHAT WE CLAIM IS:—

1. A street lighting column made in two parts which are hinged together in association with raising and lowering mechanism

embodying a hydraulic ram to control the turning of the upper part of the column about the hinge in relation to the lower part to lower the lantern carried by the upper part to a position within reach of the ground for cleaning and to return the upper part to its normal position, after the lantern has been cleaned.

2. A street lighting column according to claim 1 in which the hydraulic ram is mounted on a frame the upper and lower ends of which are connected to brackets which rest respectively on the upper and lower parts of the column.

3. A street lighting column according to claim 2 in which the frame is made in two parts hinged together and the frame is connected to the column by a key which passes through the hinged joint of the two parts of the frame and through the hinged joint of the upper and lower parts of the column.

4. A street lighting column according to claim 2 or 3 in which the hydraulic ram is connected between the upper and lower ends of the frame.

5. A street lighting column according to claim 3 in which the key is turned to raise the upper part of the column clear of the lower part to enable the upper part to be turned about the hinged joint to lower the upper part.

6. A street lighting column according to any of the preceding claims 2 to 4 in which a hydraulic pump for operating the ram is mounted on the frame.

7. A street lighting column according to claim 6 in which a release valve is provided in association with the hydraulic pump to release the pressure in the ram when the upper part of the column is being lowered.

8. A street lighting column according to any one of claims 2 to 7 in which the frame is provided with a pair of wheels to permit transportation of the frame from column to column.

9. A street lighting column having upper and lower parts hinged together in association with means for lowering and raising the upper part substantially as herein described and illustrated in the accompanying drawings.

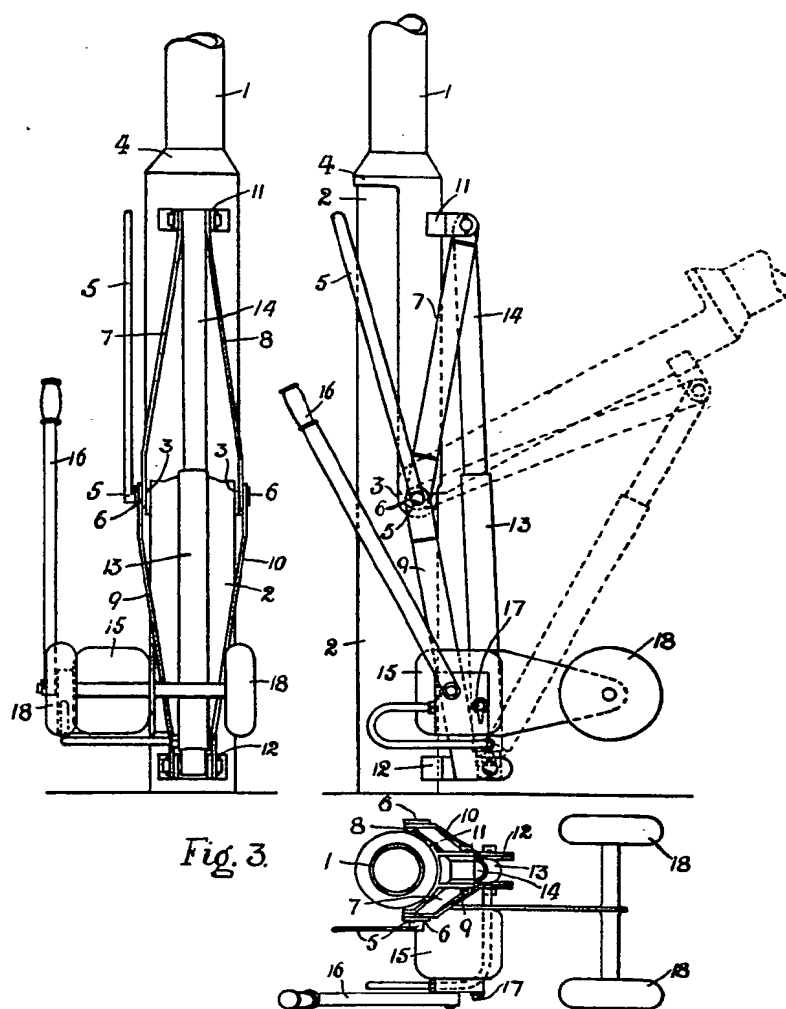
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the Original on a reduced scale*

*Fig. 2.*



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Fig. 1

Fig. 2

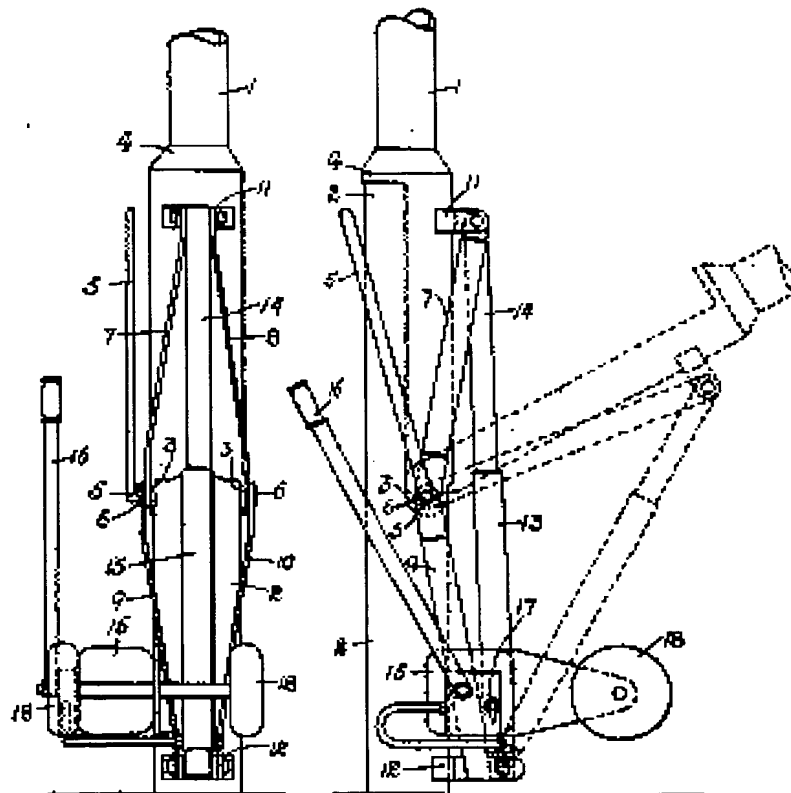
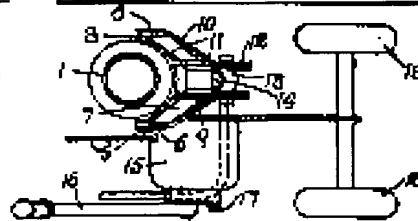


Fig. 3



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